

ABSTRACT OF THE DISCLOSURE

- An increase in effective propped lengths is evidenced in hydraulic fracturing treatments by the use of ultra lightweight (ULW) proppants. The ULW proppants have a
- 5 density less than or equal to 2.45 g/cc and may be used as a mixture in a first proppant stage wherein at least one of the proppants is a ULW proppant. Alternatively, sequential proppant stages may be introduced into the formation wherein at least one of the proppant stages contain a ULW proppant and where at least one of the following conditions prevails:
- 10 (i.) the density differential between the first proppant stage and the second proppant stage is greater than or equal to 0.2 g/cc;
- (ii.) both the first proppant stage and the second proppant stage contain a ULW proppant;
- (iii.) the rate of injection of the second proppant stage into the fracture is
- 15 different from the rate of injection of the first proppant stage; or
- (iv.) the particle size of the second proppant stage is different from the particle size of the first proppant stage.